

APPENDIX H

LITTER OBSTACLE COURSE

1. General Instructions for the EFMB Test Board.

The candidates will be formed into four-soldier litter squads. The individuals, as part of the squad, must negotiate eight obstacles. Obstacles must be negotiated correctly IAW FM 8-10-6 without causing further injury to the casualty. These obstacles will be tested under simulated combat conditions in a battlefield scenario. The litter squad will be evaluated as individuals. The squad members will be rotated after each graded obstacle is negotiated, so that each candidate is evaluated on his or her performance as the number one, number two, number three, and number four squad member during the course. The commands listed in FM 8-10-6 for each type of obstacle will be used; however, additional commands or instructions may be issued by the number one squad member to correct a deficiency or control the squad. The order of the obstacles in the land and the distance and grade of the terrain between them will be determined by the EFMB test board. Total distance traversed in the course will not exceed one kilometer, nor will the total number of obstacles exceed eight. The test board chairperson may establish a time limit, depending on the terrain and length of the course.

2. Objective.

To measure the candidates, ability to evacuate a casualty using a standard Army litter and doctrine through an obstacle course under simulated combat conditions in a battlefield scenario.

Section I

PROCEDURES FOR LITTER EVACUATION TRAINING

H-1. General.

To safely transport a casualty by litter and to ensure litter bearers are not injured by using incorrect lifting procedures, training is required for litter bearers. This section provides the techniques and procedures necessary to accomplish litter evacuation.

H-2. Basic Guides for Training Litter Bearers.

Litter bearers are normally grouped into squads of four to carry casualties. For this reason, litter procedures for squads of four are effective in training individuals to be litter bearers. The following guides promote uniformity and accuracy in training methods:

a. Several squads may be trained at the same time by one individual, or each squad may be instructed separately by an instructor or trained squad leader.

b. For the initial training procedures, a litter without a casualty on it can be used to simulate a loaded litter.

c. For later training, some personnel can be designated as "casualties." These individuals should be frequently rotated with the one carrying the litters so that all may participate in each phase of instruction.

d. For more realistic training in the handling of the different types of injuries, "casualties" may wear moulages, bandages, and splints to simulate actual wounds or injuries.

e. The persons designated as "casualties" may be positioned on the ground at suitable intervals near a line of litters, first with the head and later with the feet toward the litters. As the instruction progresses, their positions may be varied. Lastly, they may be dispersed or concealed to simulate positions that the wounded might occupy on a battlefield.

H-3. Litter Commands.

Litter procedures are not to be considered precision drills; however, certain preparatory commands and commands of execution are used to facilitate instruction. A preparatory command states the movement or formation to be carried out and mentally prepares the individual for its execution. A command of execution tells when the command is to be carried out. The use of these commands in actual operations is not contemplated. For purposes of identification in the discussion of the different types of procedures, preparatory commands will be in lower case with initial capital letters and commands of execution will be in capital letters.

H-4. Formation for Instruction.

First, align the trainees into four ranks; then give the commands to form litter squads. This is accomplished as follows:

a. The trainees count off from front to rear, one thru four, thus forming the litter squads and designating each trainee's position in the litter squad by number. Each number carries with it specific responsibilities in the litter squad. The trainee designated number one is the squad leader.

b. The squad leaders count off from right to left, designating a number for each litter squad.

c. The formation is then opened to provide each squad adequate space for performance.

d. Since exceptional circumstances may make it necessary to use two-bearer litter squads, the instruction should include procedures for these reduced squads, using bearers two and three of the four-bearer squad.

H-5. Procedures to Procure, Ground, Open, Close, and Return the Litter.

a. To Procure Litter. Upon the command of Procure, LITTER. Upon the command of Procure, LITTER, the squad leader (bearer number one) steps forward, goes to the source of supply, picks up the litter, and returns to his original position covered by bearers numbers two, three, and four.

(1) The closed litter is carried at high port except near helicopters where it is kept level with the ground to avoid contacting the rotor blades. At high port, the litter is carried diagonally across the body with the left wrist in front of the left shoulder and the right wrist near the right hip (Figure H-1).



Figure H-1. Carrying Litter at High Port.

(2) After bearer number one returns to his original position in the squad, he holds the litter in an upright position on his left side with the metal stirrups away from his body (Figure H-2).



Figure H-2. Litter Squad with Litter

b. To Ground Litter. Upon command of Ground, LITTER, bearer number one lowers the litter to the ground. With the litter squad in formation, bearer number one places his left foot beside the litter handles, steps forward with his right foot, and lowers the litter to the ground with his right foot, and lowers the litter to the ground so that it rests on the stirrups (Figure H-3). Then upon command of Litter, POSTS, the other three bearers move into their positions at the sides of the litter. Bearer number two moves to the right front, bearer number three moves to the left rear, and bearer number four moves to the left front (Figure H-4).

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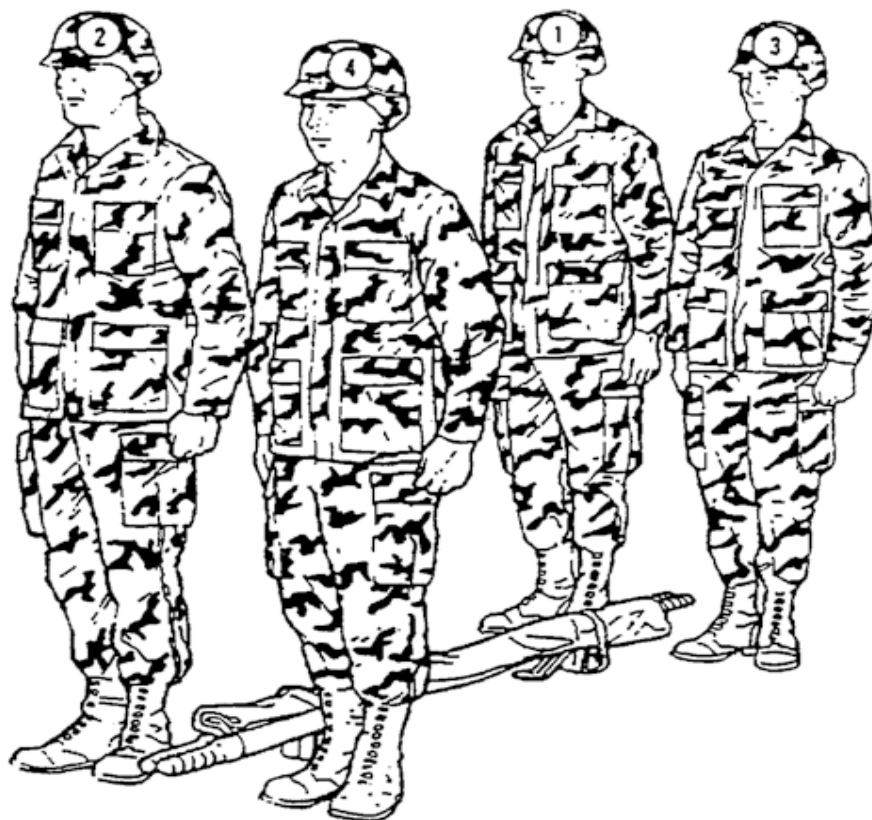


Figure H-3. Grounding Litter (Step One) Figure



H-4. Grounding Litter (Step Two)

c. To Open Litter. Upon command of Open, LITTER, all bearers face the litter and execute the command. With all bearers facing the litter, bearers number two and three pick up the litter from the ground and support it, while bearers number one and four unfasten the litter straps (Figures H-5). Bearers number two and three extend litter by pulling the handles apart with the canvas up. Then bearer number two lowers his end of the litter to the ground and bearer number three raises his end of the litter until it is in a vertical position. Using his foot, bearer number three extends the lower spreader bar to a locked position, reverses the litter, and extends the other spreader bar. Bearer number three then lowers the litter to the ground with the canvas in the up position (Figure H-6).



Figure H-5. Opening Litter (Step One)

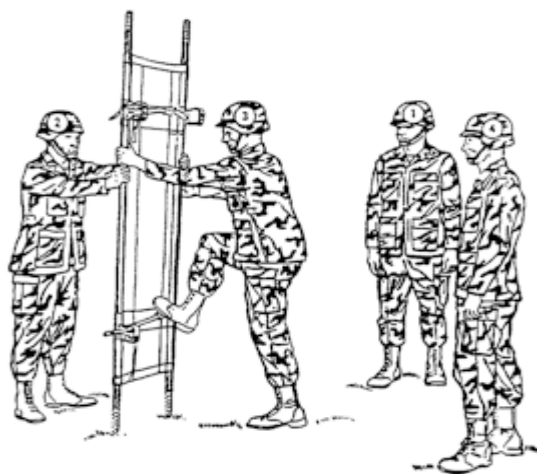


Figure H-6. Opening Litter (Step Two).

d. To Close Litter. Upon command of Close, LITTER, bearer number two supports the litter while bearer number three releases the spreader bars and turns the bars against the litter poles. Bearers number two and three then lift the litter, move the poles together, and support the litter. Bearers number one and four fold the canvas smoothly on top of the poles and secure the canvas and the poles in place with the litter straps.

e. To Return Litter. At the completion of the instruction and upon command of Return, LITTER, bearer number one returns the litter to supply.

H-6. Procedures for Loading a Casualty onto a Litter.

After the casualty has been located, the general nature of his wounds determined, emergency treatment given, and the litter opened and positioned, the bearers load the casualty onto the litter.

a. To Load a Litter (Four Bearers). Upon the following commands, the bearers position themselves, lift the casualty, position the litter, and lower the casualty onto the litter;

(1) At the command, Right (Left) Side, POSTS, the bearers take the following positions facing the casualty: bearer number two at the right (left) ankle; bearer number three at the right (left) shoulder; bearers number four and one at the right and left hips, respectively (Figure H-7).



Figure H-7. Squad at Right Side, POSTS.

(2) At the command, Lift, Casualty, each bearer kneels on his knee that is nearest the casualty's feet. Bearer number

two passes his forearms under the casualty's legs, carefully supporting any fracture, if required. Bearers number one and four place their arms under the small of the casualties back and thighs without locking hands. Bearer number three passes one hand under the casualty's neck to the farther armpit and uses the other hand to support the nearer shoulder. All bearers lift the casualty slowly and carefully and place him upon the knees of the three bearers who are on the same side (Figure H-8).



Figure H-8. Lifting Casualty to Load Litter (Step One).

(3) At the preparatory command Lower, bearer number one resumes his former kneeling position opposite the other three bearers and prepares to assist in lowering the casualty. As soon as the casualty is firmly supported on the knees of the three bearers, the bearer on the opposite side (bearer number one) relinquishes his hold and reaches for the litter (Figure H-9). He places the litter under the casualty and against the ankles of the other bearers. At the command of execution, Casualty, the casualty is lowered gently onto the litter (Figure H-10). Without further orders, all bearers rise and resume their positions at Litter, POSTS.

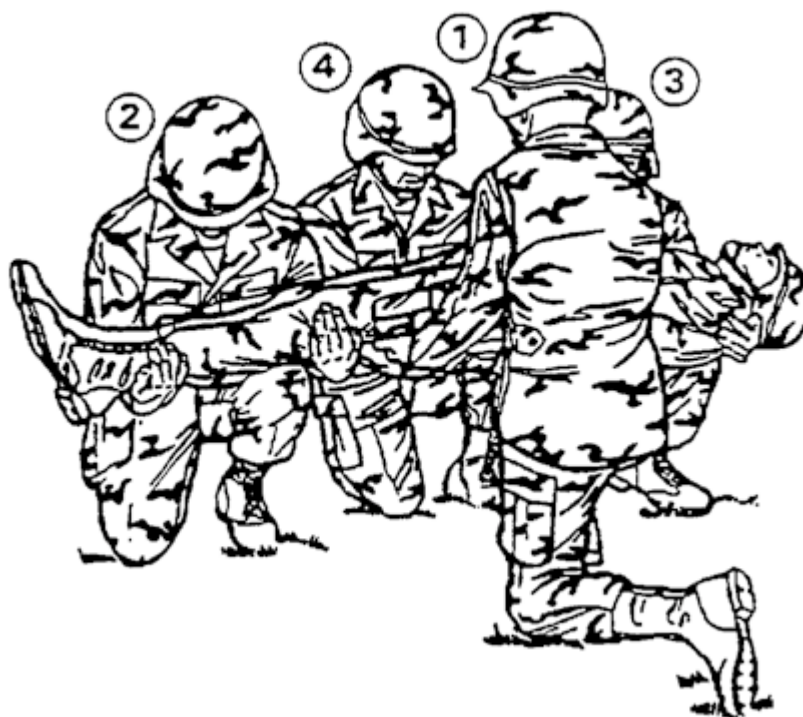


Figure H-9. Lifting Casualty to Load Litter (Step Two).

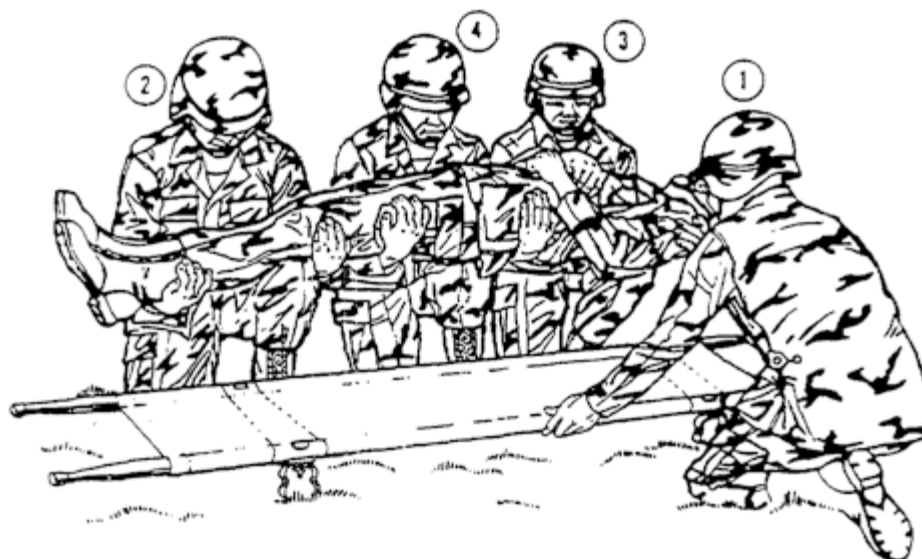
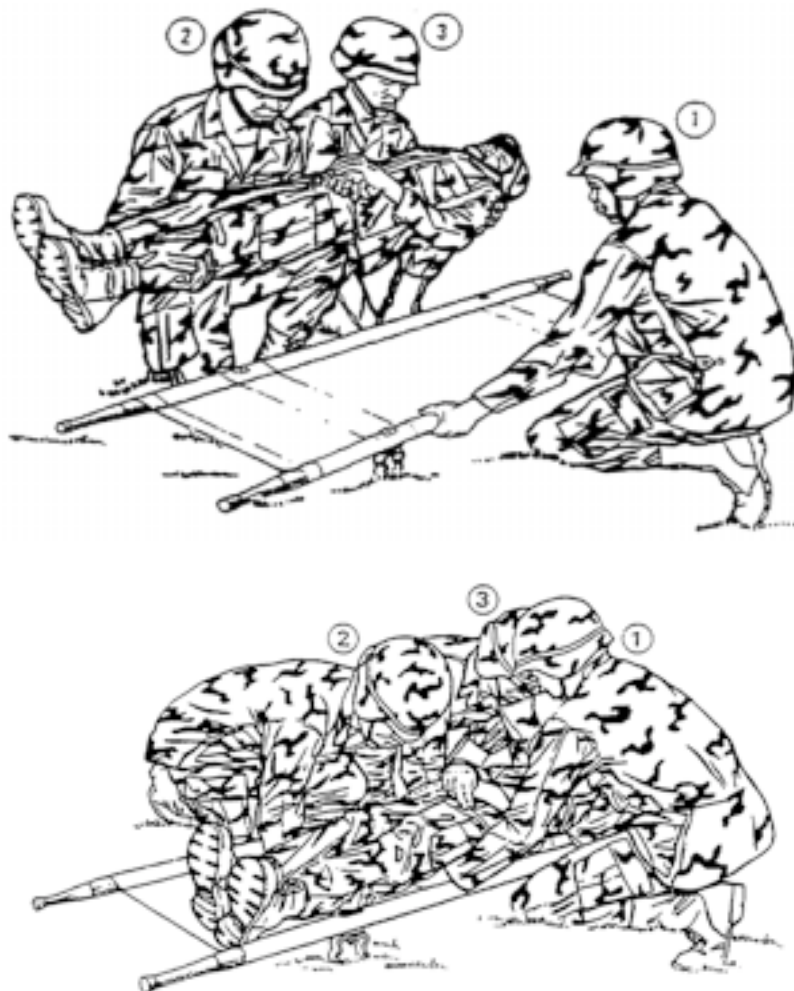


Figure H-10. Lifting Casualty to Load Litter (Step Three).

b. To Load Litter (Three Bearers). In the absence of one man from the litter squad, bearers number two and three, with the assistance of bearer number one, the litter. To lift the casualty with three lift the casualty and lower him onto bearers, bearer number two places his arms under the legs and thighs of the casualty. Bearer number three places his arms under the small of the back and shoulders of the casualty. Bearer number one, on the opposite side of the litter, places his arms under the casualty's knees-and back. The casualty is supported on the knees of bearers number two and three while bearer number one places the litter in position (Figure H-11). All Three bearers lower the casualty unto the litter (Figure H-12). The procedures are performed upon the commands cited in paragraph a. above.

Figure H-11. Lifting Casualty to Load Litter (Three Bearers).

Figure H-12. Lowering Casualty onto Litter (Three Bearers).



c. To Load Litter (Two Bearers) - The procedures for loading litters with the two bearers on the same side are illustrated in Figures H-13 thru H-16.

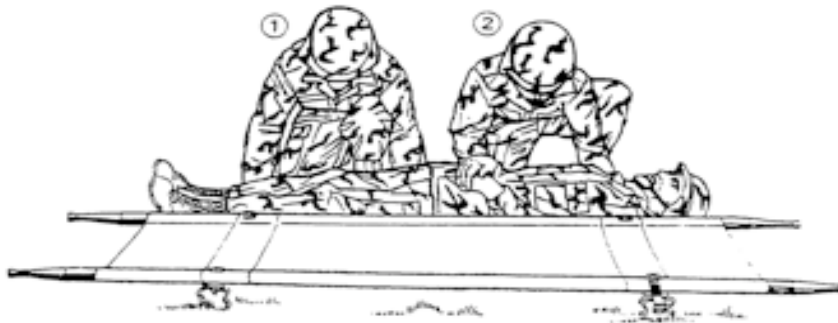
(1) At the command to Right Side, POSTS, bearers number one and two take positions at the casualty's right thigh and shoulder, respectively (Figure H-13).



Figure H-13. Two Bearers at Right Side, POSTS.

(2) At the preparatory command, Lift, each bearer kneels on his knee nearer the casualty's feet. Bearer number one passes his arms beneath the casualty's hips and knees. Bearer number two passes his arms beneath the small of the casualty's back (Figure H-14).

Figure H-14. Lifting Casualty with Two Bearers on the Same Side



(Step One).

(3) At the command of execution, Casualty, the bearers lift together, raising the casualty upon their knees. Readjusting their hold, they rise to their feet and move as close as possible to the side of the litter (Figure H-15).

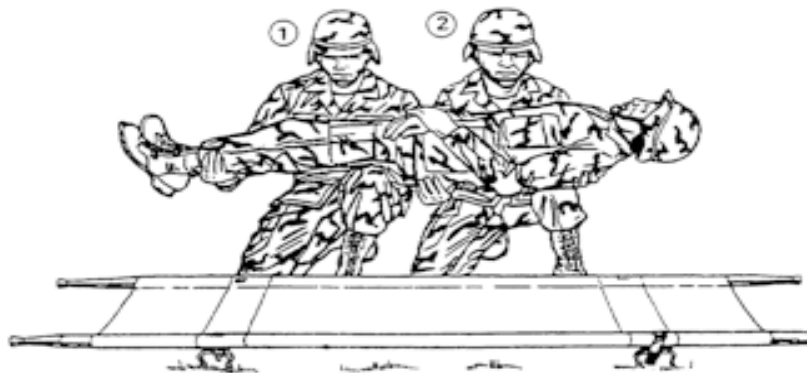


Figure H-15. Lifting Casualty with Two Bearers on the Same Side (Step Two).

(4) At the preparatory command, Lower, the bearers kneel and place the casualty on their knees. At the command of execution, Casualty, the bearers gently place the casualty onto the litter. (Figure H-16). They then rise and resume the position of Litter, POSTS, without command.



Figure H-16. Lowering Casualty onto Litter with Two Bearers on the Same Side.

d. To Load Litter with Conscious Casualty (Two Bearers). If the casualty is conscious and able to hold onto the bearers, the following procedure is used:

(1) At the command, On Each Side, POSTS, bearers



number one and two face the casualty and take positions at the casualty's right and Left hips, respectively (Figure H-17).

Figure H-17- Two Bearers, One on Each side, POSTS.

(2) At the command of execution, Casualty, the bearers lift the casualty, both rising together, and carry him to the center of the litter (Figure H-18 and H-19).



Figure H-18. Lifting Casualty with Two Bearers, One on Each Side (Step One)

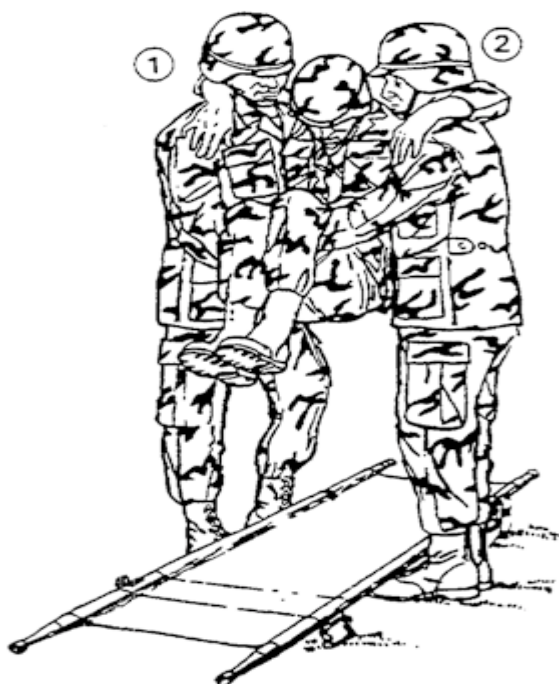


Figure H-19. Lifting Casualty with Two Bearers, One on Each Side (Step Two)

(3) At the command, Lower, Casualty, the bearers stoop and lower the casualty onto the litter in a sitting position. The casualty then releases his hold on the bearers' necks. Both bearers assist the casualty to lie down. They then resume the position of Litter, POSTS, without commands (Figure H-20).

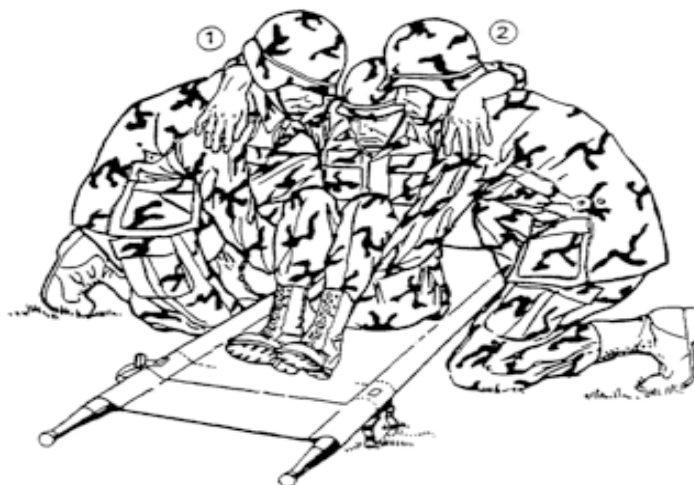


Figure H-20. Lowering Casualty onto Litter (Two Bearers, One on Each Side).

e. To Load Casualty with Back Injury. To avoid aggravating the condition of a casualty with an actual or suspected back injury, the bearers proceed as follows (Figure H-21):

(1) Each bearer kneels on his knee nearer the casualty's feet. (If the casualty is unable to hold his arms in front of him, his wrists should be tied loosely before placing him on the litter. This will prevent injury to his arms.)

(2) Bearer number one places a blanket, coat, or jacket in a firm roll or in a position to support the arch of the casualty's back. Bearer number three places one hand under the casualty's head and the other hand under his shoulders. Bearer number four places his hands under the small of the back and buttocks. Bearer number two places his hands under the thighs and calves. Bearer number one assists bearer number four in supporting the small of the casualty's back.

(3) At the command, Lift, Casualty, all bearers gently lift the casualty off the ground about eight inches. Bearers ensure that proper alignment is maintained. Bearer number one places the litter under the casualty and adjusts the roll under the casualty's back.

(4) At the command, Lower, Casualty, the three bearers lean forward, and with the aid of the bearer number one, lower the casualty onto the litter.

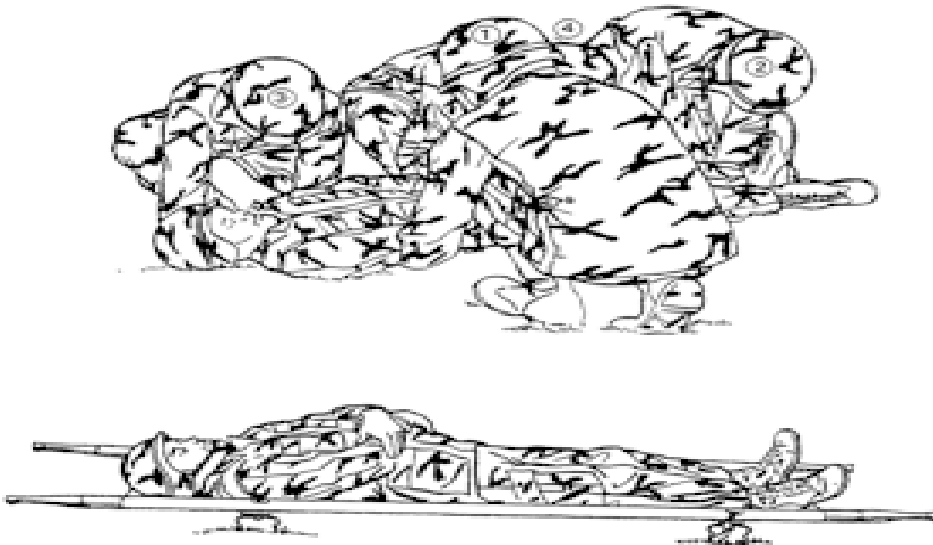


Figure H-21. Lifting Casualty with Back Injury.

Section II

Procedures for carrying a Loaded Litter.

H-7. Procedures for carrying a Loaded Litter.

After the casualty has been loaded onto the litter, the litter is lifted and carried as described below.

a. To Lift Loaded Litter. Resuming the position of Litter, POSTS, and facing in the direction of travel, the bearers lift the loaded litter upon the command Prepare to Lift, LIFT.

(1) At the preparatory command, Prepare to Lift, each bearer kneels on his knee closest to the litter. He grasps the litter handle with the hand nearest the litter and places his other hand on his raised knee.

(2) At the command of execution, LIFT, all bearers rise together keeping the litter level. When lifting, bearers should use leg muscles, not their back muscles.



Figure H-22. Lifting the Loaded Litter.

b. To Carry a Loaded Litter. The type of carry used in transporting a litter casualty depends upon the type of terrain as well as the obstacles involved. It may be necessary to use several types of carries.

(1) After the bearers lift the loaded litter, they are in position for the four-man carry (Figure H-23) which is used when the terrain is smooth and level. The command to proceed is Four-Man Carry, MOVE. With modifications, this carry is also used to pass under low obstacles.

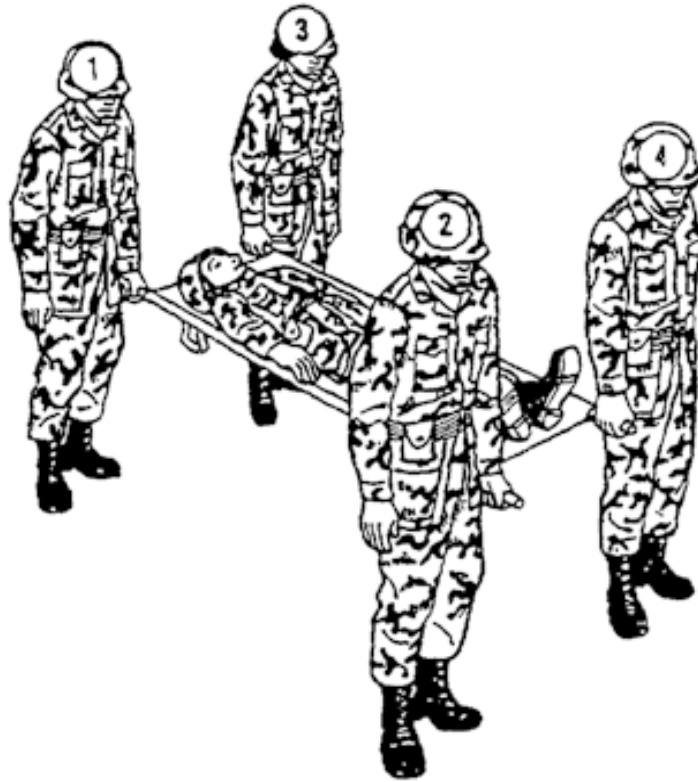


Figure H-23. Four-Man Carry for Smooth, Level Terrain.

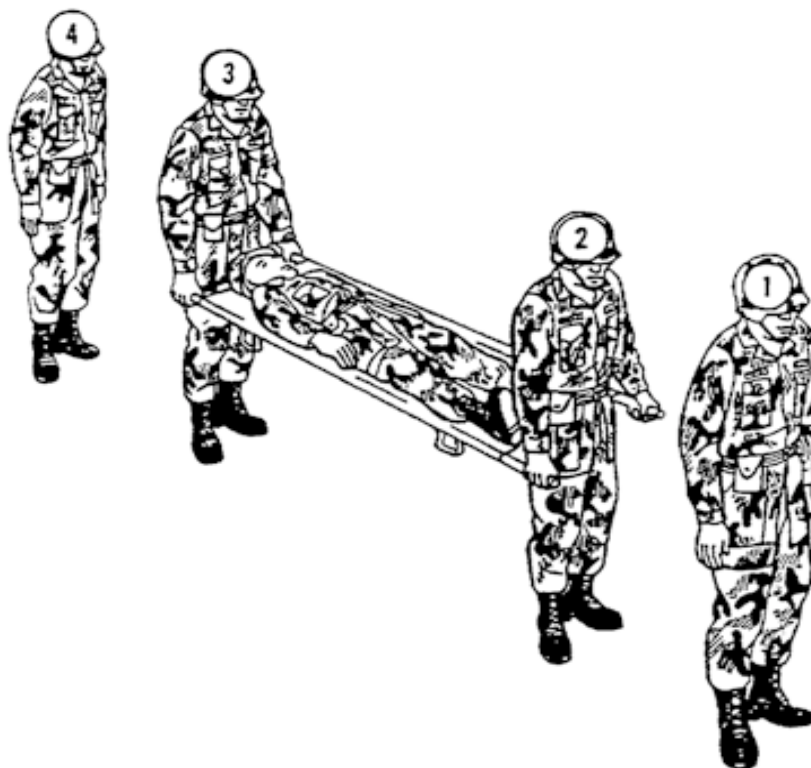
(2) The command Two-man Carry, MOVE, is given to enable the litter squad in a four-man carry to pass through or over narrow passages such as trails, bridges, gangplanks, and catwalks (Figure H-24). After the litter bearers reach the end of such passages, they change back to the four-man carry. With modification, this carry can also be used to pass through such obstacles as culverts or tunnels. Both bearers carrying the litter face the casualty and crawl on their knees through these obstacles. This requires one bearer to crawl backwards.

(a) With the litter squad in the position of the four-man carry, the preparatory command, Two-Man Carry, is given. Bearers number two and three change their holds on the litter handles to the other hand, step between handles, and take the full support of the litter as bearers number one and four release their holds.

(b) Bearer number one steps one pace in front of the squad to lead, and bearer number four falls one pace to the rear to follow.

(c) At the command of execution, MOVE, the four bearers proceed through the passage.

Figure H-24. Two-Man Carry for Narrow Trails and Passages.



(3) The command Litter Post Carry, MOVE, is given to enable the litter squad in a four-man carry to move over rough terrain (Figure H-25).

(a) With the litter squad in position of the four man carry, the preparatory command, Litter Post Carry, is given. Bearers number two and three step between the handles of the litter and take hold of the handles. Bearers number one and four then release their holds.

(b) Bearers number one and four move to the sides of the litter and grasp the litter poles.

(c) At the command of execution, MOVE, the four bearers proceed carefully over the rough terrain.



Figure H-25. Litter Post Carry for Rough Terrain.

(4) The litter is carried uphill or upstairs with the casualty's head forward except when the casualty has a fracture of a lower extremity. Before proceeding with the uphill carry, the litter must first be turned correctly. From the position of four-man carry (Figure H-23), the litter squad first moves into the position of litter post carry; then the command Prepare to Rotate, ROTATE (Figure H-26) is given and followed by command, Uphill (Upstairs) Carry, MOVE (Figure H-27).

(a) With the litter squad in the position of litter post carry, the preparatory command, Prepare to Rotate, is given. Bearers number two and three release the litter handles and step one pace away, allowing bearers number one and four to support the litter at its sides.

(b) At the command of execution, ROTATE, bearers number one and four move 180 degrees counterclockwise, thus placing the casualty's head in the direction of travel with bearer number one still on the casualty's right side.

(c) As soon as bearers number two and three observe that the rotation has been completed, they resume their positions at the litter handles. The rotation of the litter places bearer number two at the casualty's head.



Figure H-26. Rotation of the Litter for Uphill or Upstairs Carry and for Ambulance Loading.

(d) After the litter is rotated so that the casualty's head is in the direction of travel, the squad halts.

(e) At the preparatory command, Uphill (Upstairs) Carry, bearer number four moves to the foot of the litter and takes hold of the litter handle released by bearer number three. Bearer number one moves in front of the squad.

(f) At the command of execution, MOVE, the squad proceeds uphill (upstairs) with bearer number one preceding the squad. Bearers number three and four keep the litter level.

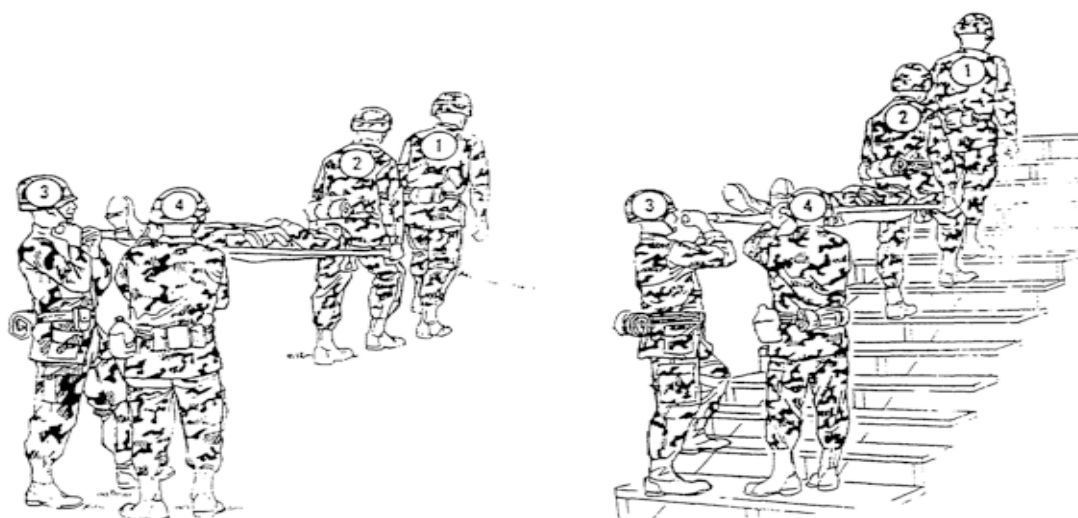


Figure H-27. Uphill and Upstairs Carry.

(5) Except when the casualty has a fracture of a lower extremity, the litter should be carried downhill or downstairs

with the casualty is feet forward. The command Downhill (Downstairs) Carry, MOVE (Figure H-28) is given when the litter squad is in the position of four-man carry (Figure H-23) or in the position of litter post carry (Figure H-25) provided it has been used to rotate the loaded litter or to move it over rough terrain just prior to carrying it downhill (downstairs).

(a) With the litter squad in the position of the four-man carry, the preparatory command, Downhill (Downstairs) Carry, is given. Bearer number three takes the full support of the litter at the casualty's head, and bearers number two and four remain in their positions at the casualty's feet.

(b) Bearer number one moves to the front, facing the squad. He supports bearers number two and four and ensures that they keep the litter level as they move downhill (downstairs).



Figure H-28. Downhill or Downstairs Carry.

(c) To Lower Loaded Litter. Before lowering the litter to the ground, the bearers resume the position of four-man carry. At the preparatory command Lower, LITTER, each bearer slowly kneels on the knee closer to the litter and gently places the litter on the ground. The squad then stands without command. For balance and support when lowering the litter, each bearer places his free hand on his other knee which remains in an upright position.

H-8. Procedures for Surmounting Obstacles.

In litter transportation, bearers must be able to surmount various artificial and natural obstacles such as fences, high walls, deep trenches, wide streams, and stairwells with small landings. Specific commands for surmounting these obstacles are neither necessary nor feasible, as they must be given in conjunction with the commands for the appropriate litter carry. Common sense must also be used in adapting specific procedures to individual situations.

a. Litter Obstacle Course. A litter obstacle course is a useful training tool for surmounting obstacles and for the physical conditioning of bearers. An obstacle course can be constructed to simulate most types of natural and artificial obstructions that litter bearers are likely to meet. Where construction of such a course is impracticable, many obstacles can be simulated from existing facilities.

b. Methods for Surmounting obstacles. A number of methods, as well as modifications in litter carries, which enable the litter squad to surmount various obstacles, are discussed below.

(1) Surmounting a fence or low wall.

(a) With the litter squad in the position of Litter Post, CARRY, bearer number two releases his grasp of the front handles at the casualty's feet and crosses the obstacle, maintaining a low silhouette. Bearers number one, three and four then advance the litter until bearer number two can resume his grip of the front handles (Figure H-29).

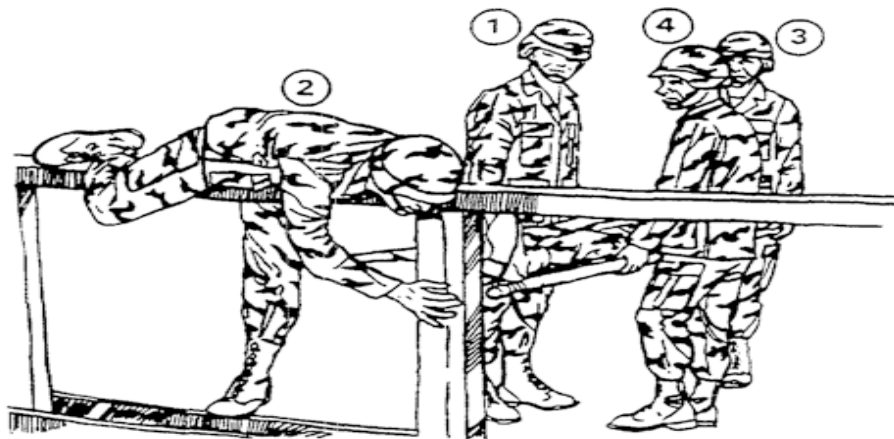


Figure H-29. Surmounting a Fence or Low Wall (Step One)

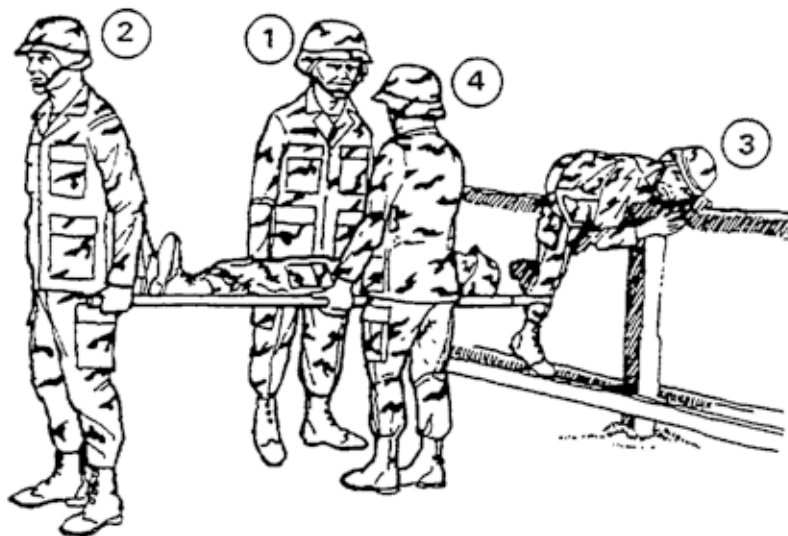
(b) The litter is rested on the obstacle with the stirrups placed on the side of the obstacles in the direction of travel. Bearers number two and three support the litter by the

front and rear handles, respectively, while bearers number one and four cross the obstacle maintaining a low silhouette. Having passed the obstacle, bearers number one and four grasp the litter poles near the rear handles held by bearer number three. Bearer Number three. Then releases his hold of the rear handles and crosses the obstacle, maintaining a low silhouette. Bearer number three. Resumes his grasp on the rear handles and bearers number one and four. Adjust the position of their holds (Figure H-30).

NOTE

The litter should be lifted, not dragged, across the top of the obstacle.

Figure H-30. Surmounting a Fence or Low Wall (Step Two).



(2) Surmounting a high wall. With the litter squad in the position of the four-man carry, the bearers turn and face each other. Together, they raise the litter approximately chest high, step close to the litter, letting their bent elbows touch their chests. The front bearers place the front stirrups beyond the wall, scale the wall and drop to the other side. All four bearers move the litter forward until the rear stirrups are against the wall, taking care to avoid scraping the casualties back. The rear bearers then scale the wall and drop to the other side and lift their end of the litter off the wall (Figure H-31). The bearers then resume the four-man carry.

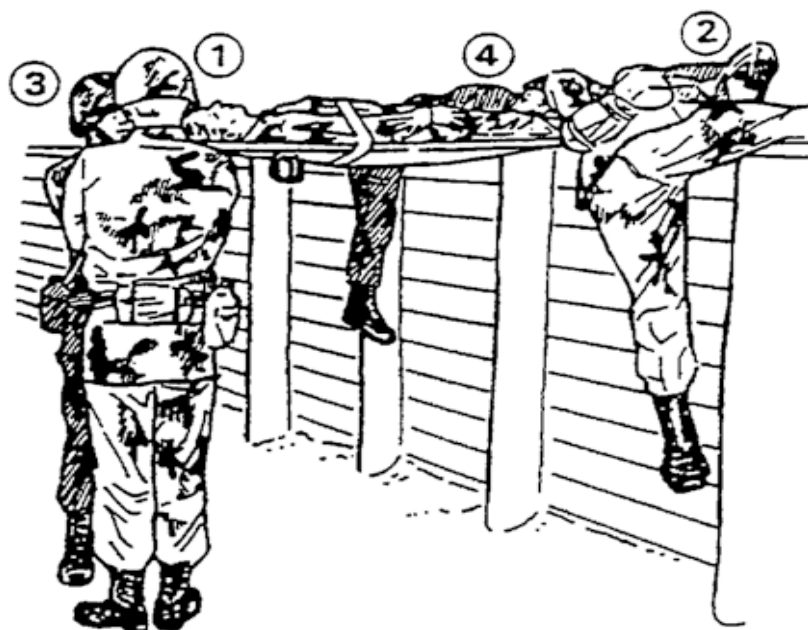


Figure H-31. Surmounting a High Wall.

(3) Fording streams and crossing deep trenches.

(a) With the litter squad in position for the four-man carry, the bearers turn and face each other, determining who is the taller of the two at each end of the litter. Together they raise the litter over their heads, keeping it level. If they are in trench, they lift the litter above the top of the trench (Figure H-32).



Figure H-32. Fording Streams and Crossing Deep Trenches (Overhead Carry, Step One).

(b) The taller bearer at each end of the litter moves between the handles, facing in the direction of travel and grasps the handles as close to the canvas as possible. The shorter bearer at each end moves under the litter, facing in the direction of travel and grasps the stirrups, which compensate for the differences in height. If all bearers are of equal height, the bearers under the litter grasp the litter poles to the side of the stirrups nearer the ends (Figure H-33).

NOTE

Should the front bearer step into a hole as they proceed across the stream and release his hold, the other three bearers could keep the litter in position

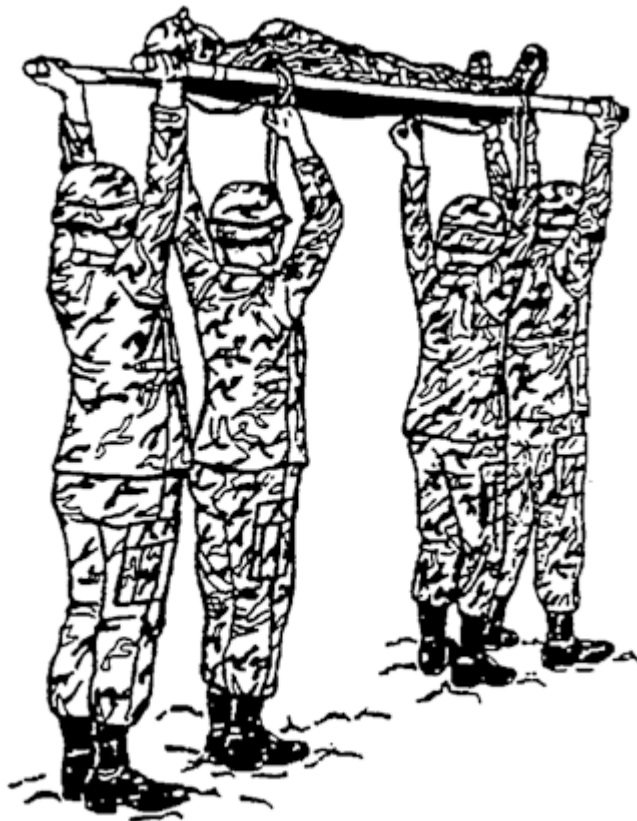


Figure H-33. Fording Streams and Crossing Deep Trenches (Overhead Carry, Step Two).

(4) Carrying a litter casualty up a stairwell with small landings. The steps for this procedure (Figure H-34) are:

(a) The litter squad proceeds upstairs to the landing with bearers number one and three supporting the head of the litter and bearers number two and four supporting the foot of the litter.

(b) Upon arrival at the landing, bearer number three turns facing the head of the litter and supports it while bearer number one proceeds several steps up the next flight of stairs. Bearers number two and four raise the foot of the litter until bearer number one can grasp the handle released by bearer number two. Bearer number two then moves to the side of the litter.

(c) With bearer number two helping bearer number one to support the litter, bearer number one grasps the handle released by bearer number four.

(d) Bearer number four continues to help support the litter on the side as he moves up the stairs.

(e) Bearer number four assists bearer number three in carrying the head of the litter while bearer number two advances and assists bearer number one in carrying the foot of the litter to the next landing.

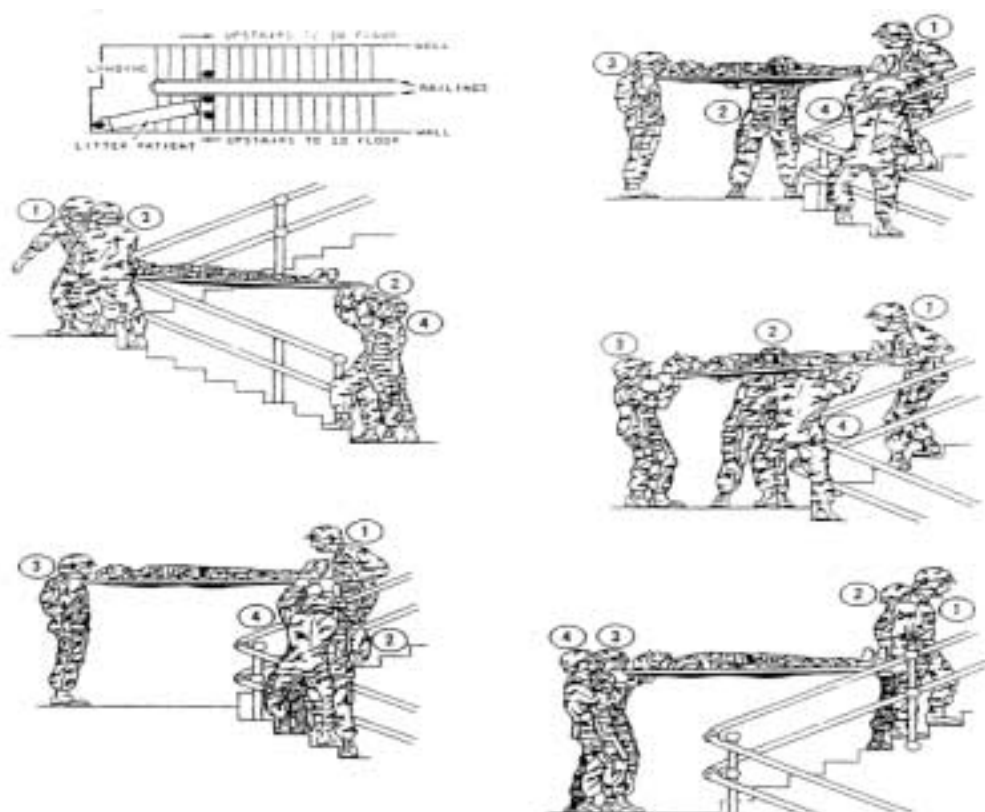


Figure H-34. Carrying a Litter Casualty up a Stairwell with Small Landings.

(5) Carrying a litter patient down a stairwell with a small landing. The steps for this procedure (Figure H-35) are:

(a) The litter squad proceeds down the steps to the first landing with bearers number one and three supporting the head of the litter and bearers number two and four supporting the foot of the litter.

(b) Upon arrival at the first landing, bearer number four turns and faces toward the litter and supports the foot of the litter while bearer number three supports the head of the litter. Bearers number one and two descend a few steps to the lower flight of stairs and receives the head of the litter from bearer number three.

(c) Bearer number three moves to the foot of the litter to assist bearer number four while bearers number one and two support the head of the litter. They then move down the stairs to the next landing.

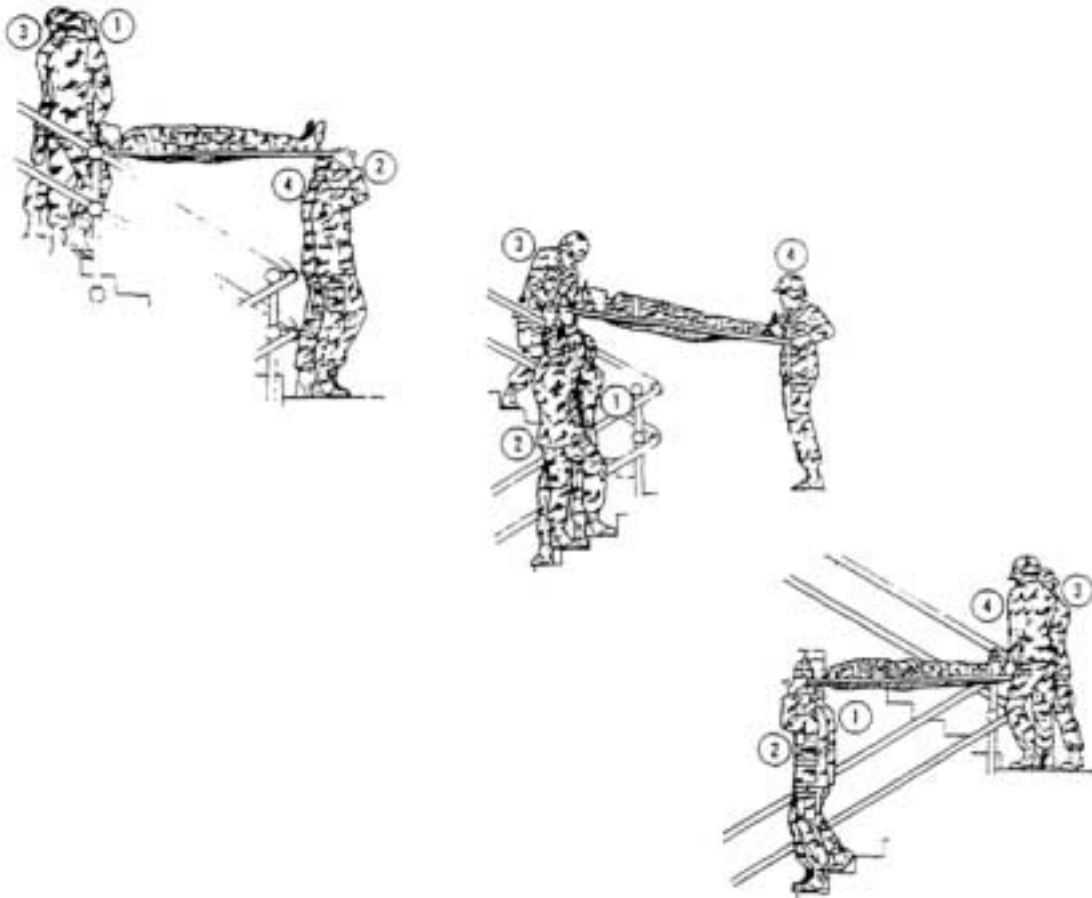


Figure H-35. Carrying a Litter Patient Down a stairwell with Small Landings.